Financial Literacy with Mr. 401(k)
['FinLit with Mr. 401(k)']
Winter Term 2023-2024
February 26, 2024

## The Future <br> Class 29: Putting it All Together



## Wednesday: Money Mavericks Workgroup Business Plan Presentations



## Monday Money Matter $\$$

Today, Amazon joins the Dow Jones Industrial Average, replacing Walgreens Boots Alliance. The Dow Jones Industrial Average is a 127-year-old stock index, composed of 30 companies. Unlike the S\&P 500 Index, the Dow Jones Industrial Average is weighted by the share price of the stocks, instead of the companies' total market value. Over the past 12 months, the S\&P 500 Index is up 28\%, whereas the Dow Jones Industrial Average is up 19\%.

# The transfer of value today, in exchange for what someone expects to have greater value in the future. 

## Recap: Investing

## Class Discussion

How might a young person attailn a financial objective to accumulate $\$ 100,000$ in portfolio within 20 years?

## The Young Investor's Dilemma



## How to Begin?

To transfer value today, investors need some money to get started. Young people go to school. Young people do not have much money. So, how can young people start investing?

## Getting Money

Only three ways:

1) Sell stuff for it -trade assets for cash,
2) Borrow it -- increase your liabilities, or
3) Make it -- generate income.

## Income Types

1) Earned income = work to make money
2) Passive income= assets can make money
3) Portfolio income = asset appreciation can make money

## Earning Income

Generally, young people do not own assets to generate portfolio income, nor assets that generate passive income. So, how can young people earn income when they are still students?

## Recap: Teenager Earned Income Ideas



OFFICE WORKER


PET SITTER


TUTOR


YARD WORKER

## Class Discussion

Can you think of other jobs or work that teenagers could do to earin money?

## Recap: Teenager Earned Income Ideas



## Recap: Two Earned Income Examples



## Babysitter

1 child: \$20 / hour; 2+ children: \$25 / hour 1 evening / week for 5 hours @ $\$ 22$ / hour =

\$5,720

gross income per year


## Yard Worker

\$20 / hour; \$40 / mow
1 day / week for 6 hours @ $\$ 20$ / hour =
gross income per year

Do the work for 8 years. Invest 70\% of after-tax income in an S\&P 500 Index Fund (Ex. Ticker: SPY). Estimate a 10\% tax rate. Spend the rest on your needs or wants.

Hypothetical growth after 20 years assuming $8 \%$ annually compounded investment returns


Class Discussion
What might be some bencitits to selecting an Sisp 500 Index Fund, rather than builaling a portfolio of inalivialual stocks and bonds? Cain you think of aing limitations to an S\&P 500 Index Fund?

## Benefits

S\&P 500 Index Fund Benefits and Limitations

- Mitigates single asset risks through diversification across hundreds of U.S. large company stocks
- Updates automatically when companies are added to or removed from the S\&P 500 Index
- Very low operating expenses


## Limitations

- It excludes bonds and other non-stock investments
- Excludes international company stocks
- Excludes small and mid size company stocks
- Weights towards the largest of the large U.S. companies

Revolving credit, is a type of loan that allows you to borrow up to a limit, repay it, and then borrow again, continuously, without needing to reapply each time.

## Revolving Credit

## Class Discussion

## Can yous think of any examples of revolving <br> eredit?

## Practical Application

- A teenager gets a credit card with a $\$ 1,000$ balance limit.
- The interest rate is $20 \%$ annually. The credit card requires a minimum monthly payment of $\$ 20$ or $2 \%$ of the balance outstanding, whichever is greater.
- The teenager purchases clothes and electronics on the credit card, building up a $\$ 1,000$ credit card balance.
- "\$20 per month is nothing," thinks the teenager, who makes the $\$ 20$ minimum monthly payment until the credit card balance is paid off.


## Class Discussion

Do gou think this was this a good decision? Could the teenager have made better choices?

## Practical Application

- It takes over 9 years to pay off the credit card.
- By the time the credit card balance is paid off, the teenager is an adult, the clothes purchased are out of style and the electronics are obsolete.
- The teenager made total payments of $\$ 2,168$ of which \$1,168 was interest expense.
- Interest expense to the teenager was income to the credit card company.

| Month <br> $\#$ | Starting <br> Balance | Interest <br> Charged | Minimum <br> Payment | Ending <br> Balance |
| :---: | :---: | :---: | :---: | :---: |
| 1 | $\$ 1,000.00$ | $\$ 16.67$ <br> $(51,000 \times 20 \% / 12)$ | $\$ 20$ | $\$ 996.67$ |
| 2 | $\$ 996.67$ | $\$ 16.61$ <br> $(996.67 \times 20 \% / 12)$ | $\$ 20$ | $\$ 993.28$ |
| 3 | $\$ 993.28$ | $\$ 16.55$ <br> $(993.28 \times 20 \% / 12)$ | $\$ 20$ | $\$ 989.87$ |
| $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ |
| 109 | $\$ 7.89$ | $\$ 0.13$ <br> $(7.89 \times \times 20 \% / 12)$ | $\$ 8.02$ | $\$ 0.00$ |

## Practical Application

1. Credit card

- It takes ove the credit ct
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| 3 |  |  | \$20 | \$989.87 |
| ... | .. | ... | ... | ... |
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## Practical Application

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- By the time

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\$20
$\$ 989.87$ balance owed

Now, let's consider the opportunity cost!

How might it have turned out if the teenager invested $\$ 20$ per month instead of building credit card debt?
—Cumulative cashflow to pay credit card
-Growth of $\$ 20$ per month at $8 \%$ investment returns compounded monthly


## Don't Become Passive Income to the Bankers!

When people carry credit card balances, they pay very high interest expense. People who pay credit card interest become passive income to banks. Think about it -the "credit" on your credit card is a bank's asset. The bank is making money from you off its asset!


Three Key Takeaways

1. There are plenty of ways for young people to earn money - find what works for you and do it!
2. Investing some of what you earn is a great way to build long-term wealth.
3. Credit card debt is the worst form of debt because interest rates are very high, so only banks can profit from it - don't make banks wealthier!


## Where to Learn More

- Financial Literacy for Young Adults Simplified: Discover How to Manage, Save, and Invest Money to Build a Secure \& Independent Future by Raman Keane
- Rich Dad Poor Dad for Teens: The Secrets About Money - That You Don't Learn in School by Robert T. Kiyosaki
- Smart Money Habits For Teens And Young Adults: How to Survive Recession and Achieve Financial Independence With Smart Budgeting, Debt Management, and Investing by Ward Nash

